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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,107	12/03/2003	Katsuhiko Hirashima	FUJR 20.777 (100794-00519)	7659
26304 7590 05/11/2007 KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			EXAMINER SU, BENJAMIN	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 05/11/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/728,107

Applicant(s)

HIRASHIMA ET AL.

Examiner

Benjamin Su

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-16 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over anticipated by Kozaki et al.(US 7139487) in view of Kuo et al.(US 7031343), and further in view of Yamauchi et al. (US 20050111464).

Kozaki et al. disclose, regarding claim 1, a slave device identified by a slave device number (see column 11, lines 3 – 6), comprising:

a send packet buffer that stores packets to be

sent (see Figure 9, Box 25a, box 25b BUFFER MEMORY),

a sending-end write controller that writes a packet in the send packet buffer (it is inherent data in the buffer memory is written in by a controller);

an upstream frame timing controller that produces a frame signal representing a bandwidth allocated to the slave device for upstream data transmission (see column 11, lines 30 – 33, wherein the Allocation identification section corresponds to an upstream frame timing controller), the frame signal being active during a period corresponding to a maximum frame size (it is inherent the slave station can only transfer data during their assigned time slots, which correspond to maximum frame size)

a sending-end read controller that reads the packets out of the send packet buffer when the frame signal is active (see column 11, lines 33 – 40, wherein the data reading sections correspond to a sending-end read controller), wherein the sending-end read controller suspends the reading of packets when the maximum frame size is reached and resumes the suspended reading next time the frame signal become active (it is inherent in passive optical network systems to stop reading packets into the frame once there is no more frame space left);

a master device (see column 11, lines 17 – 18).

Kozaki et al. fail to teach a capacity monitor that watches usage of the send packet buffer and outputs a capacity indicator representing the amount of unused memory space in the send packet buffer; a sending-end read controller that reads the packets out of the send packet buffer when the capacity indicator indicates presence of packets pending in the send packet buffer; a master device comprising: a receive packet buffer that stores packets received from the slave device in a memory space that is associated with the slave device number of the sending slave device, a delimiter detector that produces a start signal upon detection of a start delimiter of a received packet, and an end signal upon detection of an end delimiter of the received packet, a receiving-end write controller that starts writing the received packet into the receive packet buffer upon receipt of the start signal from the delimiter detector and stops writing the received packet into the receive packet buffer upon receipt of the end signal from the delimiter detector, a read request unit that issues a read request for the received packet upon issuance of the end signal, and a receiving-end read controller

that reads, in response to the read request, the received packet out of the memory space of the receive packet buffer by giving a read address that includes the slave device number of the slave device.

Kuo et al. from the same or similar field of endeavors teach a master device comprising: a receive packet buffer that stores packets received from the slave device in a memory space that is associated with the slave device number of the sending slave device (see Figure 3, Box 326, Optical Receiver, it is inherent the Optical Receiver has a buffer to store the packets received from the slave device),

a delimiter detector that produces a start signal upon detection of a start delimiter of a received packet, and an end signal upon detection of an end delimiter of the received packet (see column 10, lines 21 – 25, wherein the frame logic corresponds to a delimiter detector),

a receiving-end write controller that starts writing the received packet into the receive packet buffer upon receipt of the start signal from the delimiter detector and stops writing the received packet into the receive packet buffer upon receipt of the end signal from the delimiter detector (see column 10, lines 23 – 27, wherein the frame logic corresponds to a receiving-end write controller, the frame logic detects the start-of-packet-fragment code and writes the data to buffer, the frame logic stops when it detects the end-of-packet-fragment code),

Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use a master device comprising: a receive packet buffer that

stores packets received from the slave device in a memory space that is associated with the slave device number of the sending slave device, a delimiter detector that produces a start signal upon detection of a start delimiter of a received packet, and an end signal upon detection of an end delimiter of the received packet, a receiving-end write controller that starts writing the received packet into the receive packet buffer upon receipt of the start signal from the delimiter detector and stops writing the received packet into the receive packet buffer upon receipt of the end signal from the delimiter detector in the method taught by Kozaki et al. in order to allow efficient data transmission.

Kozaki et al. and Kuo et al. fail to teach a capacity monitor that watches usage of the send packet buffer and outputs a capacity indicator representing the amount of unused memory space in the send packet buffer; a sending-end read controller that reads the packets out of the send packet buffer when the capacity indicator indicates presence of packets pending in the send packet buffer; a read request unit that issues a read request for the received packet upon issuance of the end signal, and a receiving-end read controller that reads, in response to the read request, the received packet out of the memory space of the receive packet buffer by giving a read address that includes the slave device number of the slave device.

Yamauchi et al. from the same or similar field of endeavors teach a capacity monitor that watches usage of the send packet buffer and outputs a capacity indicator representing the amount of unused memory space in the send packet buffer (see paragraph 126, lines 1- 2, paragraph 127 , line 1 – 4); a sending-end read controller that

reads the packets out of the send packet buffer when the capacity indicator indicates presence of packets pending in the send packet buffer (see paragraph 128, lines 1 – 5).

Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use a capacity monitor that watches usage of the send packet buffer and outputs a capacity indicator representing the amount of unused memory space in the send packet buffer; a sending-end read controller that reads the packets out of the send packet buffer when the capacity indicator indicates presence of packets pending in the send packet buffer in the method taught by Kozaki et al. and Kuo et al. in order to allow efficient data transmission control.

Kozaki et al. and Kuo et al. and Yamauchi et al. fail to teach a read request unit that issues a read request for the received packet upon issuance of the end signal, and a receiving-end read controller that reads, in response to the read request, the received packet out of the memory space of the receive packet buffer by giving a read address that includes the slave device number of the slave device.

However, it is well-known in the art to read a packet by a controller once the packet has been fully received and the controller is notified through a signal.

Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use a read request unit that issues a read request for the received packet upon issuance of the end signal, and a receiving-end read controller that reads, in response to the read request, the received packet out of the memory space of the receive packet buffer by giving a read address that includes the slave

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device number of the slave device in the method taught by Kozaki et al. and Kuo et al. and Yamauchi et al. in order to allow reliable data processing.

Claims 2, 3 are rejected the same reason as above.

Conclusion

Allowable Subject Matter

7. Claims 4 – 16 are allowed.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Emerson et al. (US 20030091067) and Trost et al. (US 20020151275) are cited to show methods which are considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Su whose telephone number is 571-270-1423. The examiner can normally be reached on Monday - Friday 10 - 3 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BZS



RICKY Q. NGO
SUPERVISORY PATENT EXAMINER